



MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
61st session  
Agenda item 5

MEPC 61/5/8  
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## **REDUCTION OF GHG EMISSIONS FROM SHIPS**

### **Definition of draught in the calculation of the EEDI**

**Submitted by the Royal Institution of Naval Architects (RINA)**

#### **SUMMARY**

*Executive summary:* RINA recommends a standard definition of draught throughout the draft regulations instead of the three different terms currently used

*Strategic direction:* 7.3

*High-level action:* 7.3.2

*Planned output:* 7.3.2.1

*Action to be taken:* Paragraph 11

*Related documents:* MEPC.1/Circ.681, EE-WG 1/3/7 and MEPC 61/5/2

#### **Introduction**

1 Guidelines for calculation of the EEDI for new ships are contained in the annex to MEPC.1/Circ.681. The guidelines contain two different definitions of draught at which the EEDI is to be calculated.

2 Guidelines for verification of the EEDI are contained in document EE-WG 1/3/7 and these guidelines contain further options for the definition of the draught at which the EEDI is calculated and verified.

3 This document proposes a standard definition for the draught at which the EEDI is to be calculated and verified.

#### **Current Definition of Draught**

4 Paragraph 2.2 of the Annex to MEPC.1/Circ.681 reads:

"...  $V_{ref}$  is the ship speed, measured in nautical miles per hour (knot), on deep water in the maximum design load condition (*Capacity*) as defined in paragraph 3 ...".

For certain ship types, paragraph 3 defines *Capacity* as deadweight.

5 Paragraph 2.4 of the annex to MEPC.1/Circ.681 reads:

"*Deadweight* means the difference in tonnes between the displacement of a ship in water of relative density of 1,025 kg/m<sup>3</sup> at the deepest operational draught and the lightweight of the ship."

6 The Guidelines on Survey and Certification of the Energy Efficiency Design Index contained in document EE-WG 1/3/7 contain three options for the definition of draught.

7 Germany, in paragraph 8 of document MEPC 61/5/2, recommends that deadweight be determined at the "summer load draught" as certified in the final stability booklet, which is understood to mean the draught corresponding to the summer Load Line marked on the side of the ship.

### Discussion of the Definitions

8 Maximum design load condition and deepest operational draught are rather imprecise terms and identical ships could, if their owners wished, have different deepest operational draughts, provided that they are less than the draught corresponding to the summer Load Line.

9 It is also possible for owners to request an assigned summer load draught less than that corresponding to the minimum freeboard allowed by the Load Line regulations. If the definition "summer load draught" is adopted, it should therefore be further defined as the draught corresponding to the minimum summer freeboard according to the Load Line regulations.

### Proposal

10 It is recommended that the following amendments be made to the draft text:

.1 amend paragraph 2.2 of the annex to MEPC.1/Circ.681 as follows:

"...  $V_{ref}$  is the ship speed, measured in nautical miles per hour (knot), on deep water in the ~~maximum design load~~ condition (*Capacity*) as defined in paragraph 3 ...."

.2 amend paragraph 2.4 of the annex to MEPC.1/Circ.681 as follows:

"Deadweight means the difference in tonnes between the displacement of a ship in water of relative density of 1,025 kg/m<sup>3</sup> at the ~~deepest operational draught~~ summer load draught and the lightweight of the ship. The summer load draught should be taken as the maximum summer draught permitted by the Load Line regulations."

.3 references to draught or fully loaded condition in the Guidelines on Survey and Certification of the Energy Efficiency Design Index contained in document EE-WG 1/3/7, paragraphs 4.2.2.1, 4.2.2.2, 4.2.4, 4.2.6.4, 4.3.1, 4.3.9.1, 4.3.9.2, notes to Figure.2, 4.3.12 and Fig. 2.1 in Appendix, should be amended to read as follows:

"summer load draught".

### Action requested of the Committee

11 The Committee is invited to consider the above proposal and take action as appropriate.